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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,302	11/14/2000	Hong Jo Jeong	2950-0176P	6861
2292	7590	03/26/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			CHU, KIM KWOK	
		ART UNIT	PAPER NUMBER	
		2653	9	
DATE MAILED: 03/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/711,302	JEONG ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Kim-Kwok CHU	2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on Amendment filed on 2/23/04 (paper 8).
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 5-8, 12, 14, 15 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 5-8, 12, 14, 15 and 19-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Remarks***

1. Applicant's Remarks (paper 8) filed on February 23, 2004 have been fully considered but they are not persuasive.

(a) Applicant states that the prior art of Satoh does not teach the feature "summing the values of the sampled focus error signal, which are less than a first predetermined reference level" (page 8 of the Remarks, lines 3-5). Accordingly, Satoh teaches that focus error signals are received in photodetecting elements A-D and then the error signals are summed (Fig. 5). The summed focus error signal is less than a predetermined reference level such as the S-letter level in Fig. 4.

***Specification***

2. The disclosure is objected to because of the following informalities:

(a) in the Amendment filed on June 23, 2003, on page 6, lines 8 and 9, the term "initializes a sum value" does not refer to any kind of value to be added. For example, to sum the signals detected by the photodetector; and

(b) as a consequence, in Fig. 5, the term "initialize a sum value" in step S2 should be corrected accordingly.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-8, 12, 14, 15 and 19-24, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in claim 5, line 7, the term "summing the values of the sampled focus error signal" is not clear because the focus error signal is already a summed signal. On the other hand, the specification discloses that "the microcomputer adds the digitized focus error to the sum value ...." (page 6 of Amendment, last two lines). Applicant should clarify how the focus error signal is summed;

(b) similarly, in claim 20, line 6, the term "summing the values of the sampled focus error signal" is not clear. Applicant should clarify how the focus error signal is summed; and

(c) in claim 22, the term "analog-to-digital converting starts to sample the focus error signal performed ...." is not clear because it does not read right.

5. The claims not specifically mentioned above are indefinite based upon their dependence on a rejected claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

7. Claims 5, 6, 8, 14, 15 and 20-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Satoh et al. (U.S. Patent 5,903,531).

Satoh teaches a method for checking the existence of an optical disk having all of the steps as recited in claims 5, 6, 8, 14 and 15. For example, Satoh teaches the following steps:

(a) as in claim 5, receiving a focus error signal (Fig. 5);  
(b) as in claim 5, sampling the received focus error signal at constant intervals (Figs. 3 and 5; all received signal are sampled/synchronized with clock signals from the system controlling means 100);

(c) as in claim 5, summing the values of the sampled focus error signal, which are less than a first predetermined reference level (Figs. 7 and 8; the summed focus error signal is less than

a predetermined reference level such as the S-letter level in Fig. 4);

(d) as in claim 5, determining whether the summed value is greater than a predetermined judging level (Figs. 7 and 8; Step A5 or A10);

(e) as in claim 5, judging the existence of an optical disk based on the result in the determining step (Figs. 7 and 8; step A5 or A10);

(f) as in claim 6, the step (b) is started when the value of the focus error signal exceeds the first predetermined reference level, while moving an optical pickup (Figs. 7 and 8; S letter level is the first predetermined reference level);

(g) as in claim 8, in the judging step (e), an optical disk is judged to exist if the summed value of the focus error signal is greater than the predetermined judging level (Figs. 7 and 8; step A7 or A12);

(h) as in claim 14, step (b) is performed if a focus OK signal is asserted (Figs. 7 and 8; step A2); and

(i) as in claim 15, the focus OK signal is asserted based on a result of comparing a beam strength signal and a reference signal (Figs. 7 and 8, step A2; focus OK signal is obtained when the S letter level is determined).

8. Claims 20-23 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Sato further shows:

- (a) as in claim 20, an analog-to digital converter for sampling the focus error signal at constant intervals (Fig. 5; focus error is a summing signal; the summing circuit 23 is an A/D conversion device so that detected analog signals are digitized and then summed); and
- (b) as in claim 22, the analog-to-digital converter starts to sample the focus error signal if a focus OK signal is asserted (step A2; focus OK signal is obtained when the S letter level is determined and then the summed focus error signal is obtained).

***Allowable Subject Matter***

10. Claims 7, 12, 19 and 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 7, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

- (a) the predefined reference level includes first and second predetermined reference levels; the first predetermined reference level is for starting the sampling step
- (b) and the second predefined reference level is for sampling the focus error.

As in claims 19 and 24, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

- (a) a focus error value is added to the summed value if the error value is greater than the predetermined reference level.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeya et al. (6,240,054) is pertinent because Takeya teaches an optical disc playback device having a disc discriminating device.

Hwang (6,058,082) is pertinent because Hwang teaches an optical disc playback device having a disc discriminating device.

Mizumoto et al. (5,351,226) is pertinent because Mizumoto teaches an optical disc playback device having a focus OK signal

Ryoo (5,966,357) is pertinent because Ryoo teaches an optical disc playback device having a disc discriminating device.

Hangai et al. (5,079,755) is pertinent because Hangai teaches an optical disc playback device having a disc mount detecting means.

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13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for entry. Or:

(703) 746-6909, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (703) 305-3032 between 9:30 am to 6:00 pm, Monday to Friday.

fc 3/18/04

Kim-Kwok CHU  
Examiner AU2653  
March 18, 2004

(703) 305-3032

*William Korzuch*  
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